

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of obtaining an image of a buried structure in an object comprising:
 - providing a camera for imaging visual and infrared-images;
 - providing a bounded infrared light source;
 - partly irradiating said object by said bounded infrared light source;
 - imaging ~~a non-irradiated~~ an area of said object, by said camera, that is not irradiated by said bounded infrared light source to create an image of said buried structure; and
 - combining said image of said buried structure ~~image~~ with a visual image of said object.
2. (Currently Amended) A method according to claim 1 wherein ~~said~~ irradiation of said object, during the partly irradiating step, is varied in location over time so as to provide a full image by subsequently combining ~~of~~ partial images rendered during multiple iterations of the imaging step.
3. (Currently Amended) A method according to claim 1 ~~or 2~~, wherein said image of said buried structure is obtained by scanning a light beam over said object.
4. (Currently Amended) A method according to claim 1 ~~or 2~~, wherein said image of said buried structure is obtained by subsequently irradiating said object ~~by~~ in predetermined patterns.
5. (Currently Amended) A method according to claim 4, wherein said ~~partial image is obtained by alternately irradiating said object by said~~ predetermined patterns are complementary patterns.
6. (Currently Amended) A method according to claim 4 ~~or 5~~, wherein said predetermined patterns ~~are~~ comprise any one or more of the following: matrix-patterns, line patterns, dot patterns or concentric patterns.

7. (Currently Amended) A method according to ~~any of claims 4-6~~claim 4, wherein said object is partly irradiated only at predetermined positions that are spaced apart.

8. (Currently Amended) A method according to ~~any of claims 1-7~~claim 1, wherein said ~~image is obtained by~~camera is a CMOS-camera.

9. (Currently Amended) A method according to ~~any of the preceding claims~~claim 1, further comprising:

aligning said bounded infrared light source with a visual light source;

providing a first edge analysis of said an infrared image;

providing a second edge analysis of said a visual image;

comparing said first and second edge analysis; and

discarding edges in said infrared image that are also detected in said ~~second~~visual image.

10. (Currently Amended) A method according to claim 9 further comprising the step of correcting said ~~first~~infrared image to discard saturated image areas.

11. (Currently Amended) A method according to ~~any of the preceding claims~~claim 1, wherein said ~~images~~image of said buried structure and visual image are provided stereoscopically.

12. (Currently Amended) A method according to ~~any of the preceding claims 9-10~~claim 9, wherein said ~~first~~infrared image is spectrally ~~analysed~~analyzed, and wherein said spectral analysis is projected into said ~~second~~visual image.

13. (Currently Amended) A method according to claim 12, wherein said spectral analysis comprises a pulsatility analysis and/or a ~~hart~~heart beat frequency analysis and/or respiratory frequency analysis.

14. (Currently Amended) A method of enhancing imaging of a buried ~~structures~~structure in an object, comprising:

providing a first light source for providing first light of a wavelength that images said buried structure;

providing a second light, aligned with said first light, of a wavelength that visually

images said object, ~~aligned with said first light source;~~
obtaining a first image by irradiating said object with said first light;
providing an edge analysis of said first image ~~in order~~ to detect the edges of said buried structure;
obtaining a second image by irradiating said object with said second light;
providing an edge analysis to detect edges in ~~of~~ said second image;

comparing edges detected during the edge analysis of said second image with edges detected during the edge analysis of said first image;
discarding edges detected in said first image that are also ~~detected~~ present in the edges detected in said second image to render a modified first image; and
combining said modified first image and second ~~images for defining~~ image to depict edges of said buried structure in said ~~visual~~ second image.

15. (Currently Amended) A method according to claim 14, further comprising correcting said first image ~~to discard~~ by discarding saturated image areas.

16. (Currently Amended) System for obtaining an image of a buried ~~structures~~ structure in an object, comprising:

a bounded light source for irradiating said object by light for providing a first image of said buried structure and for providing a second visual image of said object;
a camera device for obtaining said first image and second visual image ~~images~~ image; and
a processing device arranged ~~to~~ for:

providing a gradient analysis of said first image ~~in order~~ to detect the edges of said buried structure; and ~~for~~

providing a gradient analysis ~~of~~ to detect edges in said second image;

comparing edges detected during the gradient analysis of said second image with edges detected during the gradient analysis of said first image;

discarding edges detected in said first image that are also present in the edges detected in said second image to render a modified first image; and

combining said modified first image and second ~~images for defining image to~~
depict edges of said buried structure in said ~~visual~~ second image.

17. (Currently Amended) A system according to claim 16 further comprising:
a puncture tool for puncturing human tissue; and
an IR light source provided in said puncture tool

18. (Currently Amended) A system according to claim 17, wherein said IR light
is aligned along said puncture tool.

19. (Currently Amended) A system according to claim 17 ~~or 18~~, wherein said IR
light source is provided in a tip of said puncture tool.

20. (Currently Amended) A system according to ~~any of claims 17-19~~ claim 17,
wherein said puncture tool is provided with an IR radiating coating.

21. (Currently Amended) A system according to ~~any of claims 17-20~~ claim 17,
wherein the IR light source and the bounded light source are alternately activated.

22. (Currently Amended) A puncture tool for puncturing human tissue; ~~and~~
including an IR light source ~~provided in said puncture tool~~.